Space Acceleration Measurement System (SAMS) Fact Sheet

Increment: 8

SAMS Operational Support

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SAMS will not have regular on-console shifts. We will continue to monitor our hardware and respond to OCRs, etc. If a situation arises that requires us to be on-console, we will do so.

SAMS is always available 24/7 via pager.

The SAMS E-Mail account is distributed to all Ops Team Members to ensure a quick response.

SAMS Hardware

- Express Rack 1

SAMS Drawer	SAMS EE	SAMS SE	Location in rack
RTS/D1	EE-F02	SE-F02 SE-F03	Drawer 1
RTS/D2	EE-F03	SE-F04 SE-F05	Drawer 2

NOTE: The power indicator lights for the ISIS Drawer positions are non-functioning on ER1.

- Express Rack 2

SAMS EE	SAMS SE	Location in rack
EE-F05	none	Embedded

- Express Rack 3

SAMS EE	SAMS SE	Location in rack
EE-F04	none	Embedded

- Express Rack 4

SAMS ICU	Location in rack
SAMS ICU/D1	Drawer 2

NOTE: The power indicator light for the ISIS Drawer 2 position is non-functioning on ER4.

- MSG Rack

SAMS EE	SAMS SE	Location in rack
EE-F06	SE-F08	Work Volume

NOTE: The MSG configuration puts SAMS EE-F06 on LAN 2

SAMS Data

<u>Telemetry Science Data</u>
All SAMS EE's and ICU need to communicate with each other. This rack to rack communication is mapped in the CAM tables.

Each EE boots off of the ICU.
Each EE sends the acceleration data and the housekeeping data to the ICU.
The ICU downlinks all SAMS data (APID 890, 898) to the ground.

<u>Health and Status Data</u>
Each EE sends health and status data to the RIC associated with the Express Rack it resides in.
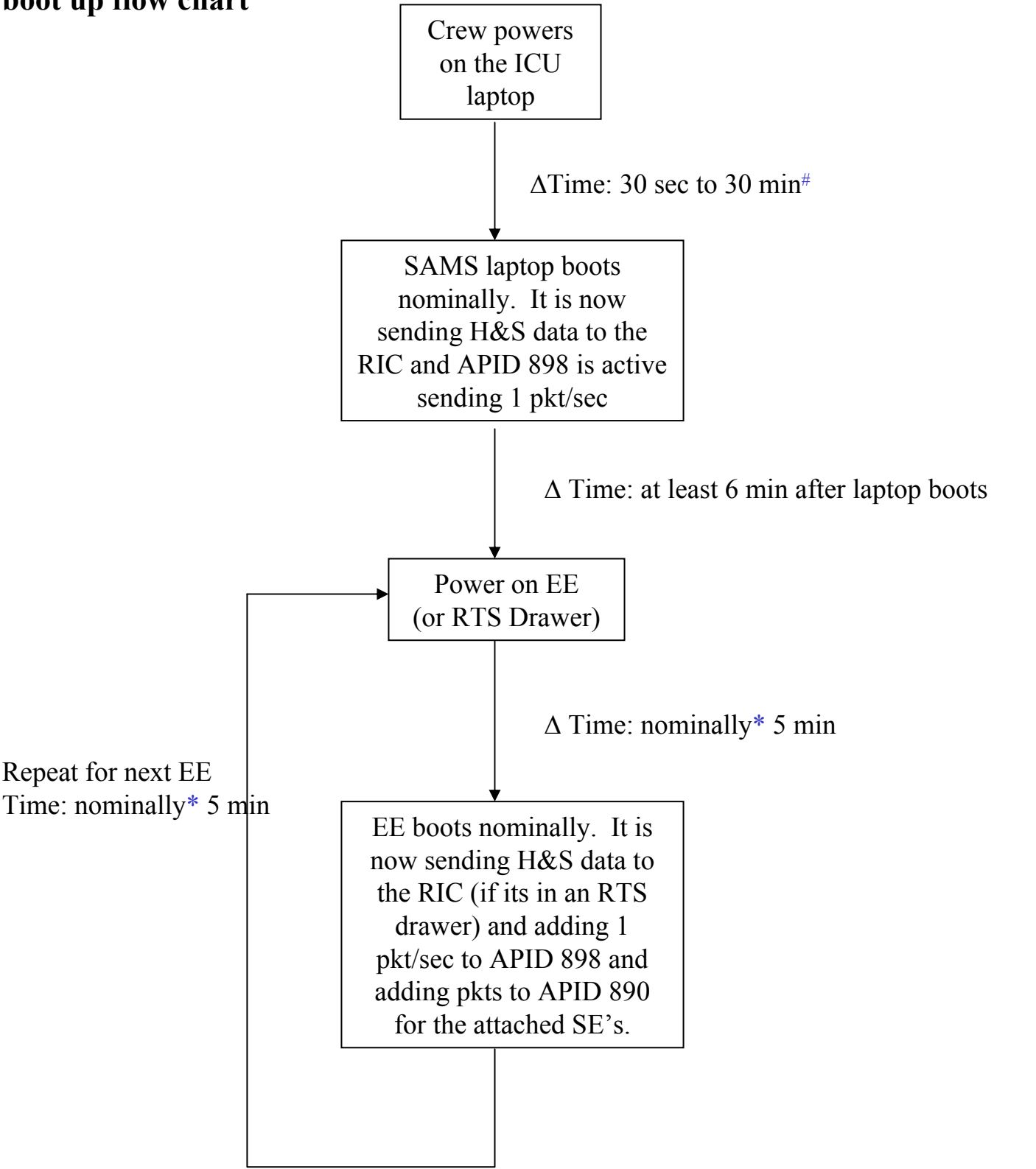The ICU sends health and status data to the RIC associated with the Express Rack it resides in.

<u>Commanding</u>
All SAMS Commands are sent to the ICU.

SCIENCE Data Support

The PIMS Team (pimsops@grc.nasa.gov) collects, processes, and displays the SAMS and MAMS acceleration data.
The SAMS data can be found at http://pims.grc.nasa.gov/

SAMS power up and boot up flow chart

Crew powers on the ICU laptop

ΔTime: 30 sec to 30 min#

SAMS laptop boots nominally. It is now sending H&S data to the RIC and APID 898 is active sending 1 pkt/sec

Δ Time: at least 6 min after laptop boots

Power on EE (or RTS Drawer)

Δ Time: nominally* 5 min

Repeat for next EE
Time: nominally* 5 min

EE boots nominally. It is now sending H&S data to the RIC (if its in an RTS drawer) and adding 1 pkt/sec to APID 898 and adding pkts to APID 890 for the attached SE's.

possible file system check
*slow boot issues cause a slower boot time